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THE FINANCIAL PHASE OF LONG RANGE PLANNING FOR PUBLIC SCHOOLS--PRESENTING A METHOD FOR PROJECTION.

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THIS DOCUMENT PRESENTS A METHOD FOR ESTIMATING FUTURE FINANCIAL NEEDS AND RESOURCES IN A LONG-RANGE PLAN FOR SCHOOL DISTRICTS. REQUIRED ASSUMPTIONS FOR A 10-YEAR PROJECTION ARE DISCUSSED AND SPECIFIC ADVICE ON COMPUTING THE NECESSARY ELEMENTS IS GIVEN. DIFFICULTIES ASSOCIATED WITH EACH ELEMENT ARE EMPHASIZED, AND SOME SOLUTIONS ARE PROPOSED. ATTENTION IS GIVEN TO THE NEED FOR EVALUATING PROJECTED AND ACTUAL INCOME AND COSTS AT THE CLOSE OF EACH FISCAL YEAR. AN APPENDIX SHOWS SAMPLE PROJECTION TABLES AND PROJECTION GRAPHS. (TT)

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Butler PA.
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THE FINANCIAL PHASE OF LONG RANGE PLANNING FOR PUBLIC SCHOOLS

PRESENTING A METHOD FOR PROJECTION

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A. INTRODUCTION

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   b. Assessed Value
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   d. Ratio of Local Effort to State Subsidy

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THE FINANCIAL PHASE OF LONG RANGE PLANNING FOR PUBLIC SCHOOLS

A. INTRODUCTION.

All school districts of Pennsylvania are required to develop a long range program for education. This program is to outline in detail the plan for ten years into the future. One section of this long range plan must show how the district will meet its financial needs from year to year.

How to chart the income needed for each of the next ten years, how to determine the costs of instruction, administration, debt service and all other categories of expenditure, the sources of income, tax needs, assessed valuation and many other data needed, presents a complex problem.

1. Basic Assumptions.

This paper proposes to present a method of attack on the problem of estimating future financial needs. This method is based on several hypotheses:

a. Current Expense Costs.

Current Expense can be projected for the next 10 years by determining the rate of increase over the past ten years and assuming a rate of increase for the next ten years. This could be on the basis of average per cent of growth per year for the past 10 years or on some span of years which seems to be most realistic to use for the projection rate. It seems reasonable to assume that Instruction Costs in 1976-77 will be at least double the amount expended in 1966-67. We will also assume that Current Expense will continue to increase at a similar rate and will be approximately the same per cent of Instruction Costs in the future as in 1966-67.

b. Assessed Valuation.

Growth in Assessed Valuation can be projected on the rate of change which took place in the past 10 years, or some shorter span of time may be used if the earlier years would distort the average. In some cases the County Assessment Office may be planning a re-evaluation soon and that office should be consulted in making projections of future valuations.

c. Number of Pupils.

A projection can be made of the number of pupils anticipated for the future years. This will be a part of the Section of Long Range Planning which deals with population projections and enrollment trends. These projected figures must then be reduced to Weighted Average Daily Membership (WADM) for each of the projected years. We must assume that a realistic projection is possible if based on consideration of all available information, latest school census, birth rates, etc.

d. Ratio of Local Effort To State Subsidy.

The projection of the per cent of total expenditures which will be contributed by the State from year to year will be influenced by two factors;

(1) the per cent contributed by the State in past years

(2) the indication of change, if any, in the wealth (State Market Value) per Weighted Average Daily Membership.

This could cause a change in the Aid Ratio for the District. In the case of (a) above, attention must be given to the change in State contribution as a result of the new formula (Aid Ratio.)

We will assume that the State will follow the basic equalization commitment, that fifty (50) per cent of the cost of education for the State as a whole will be paid as subsidy. This anticipates the necessary changes in the formulae will be made as the cost per pupil increases.

A preliminary estimate of State Market Value per WADM is as follows:*

1968-69 -	$16,217	1970-71 -	$16,644
1969-70 -	$16,334	1971-72 -	$17,008

These estimates seem conservative when we consider inflation, state wide improvements and a trend towards a decrease in WADM in some districts.

2. Total Expenditures.

Total Expenditures are divided into three parts

1. Current Expense - 0100-1100
2. Capital Outlay - 1200
3. Debt Service - 1300

In the case of Current Expense, Outgoing Transfers (1400) will be added in to Instruction when they are paid out to provide instruction of resident pupils by the County School Board or by some other district. These Outgoing Transfers will be counted as part of Instruction Cost. Total Current Expense will be the product of the estimated WADM for a given year multiplied by the estimated Current Expense cost per WADM for the year. This substitutes the product of two estimates for the sum of 12 estimates.

Capital Outlay can be estimated on a year to year basis by noting past expense and by including the cost of any anticipated renovation in buildings and any increase in equipment as outlined in the Section dealing with Facilities and Equipment.

*Source: Department of Public Instruction - Office of Research and Statistics.

Debt Service can be quite acurately projected for each year since rental payments are fixed. Only where new buildings are to be funded will there be need for estimating future construction and rental costs.

B THE FINANCIAL PATTERN OF THE PAST.

The financial pattern of the past can be charted by using certain tabulation to show basic facts. The main tables are outlined below. Each item would be tabulated for a ten year period unless certain earlier years are not realistic.

1. Market and Assessed Valuations By Year.

   a. Market Value
   b. Per Cent Increase Over Previous Year
   c. Assessed Value
   d. Per Cent Increase Over Previous Year
   e. Ratio of A.V. to M.V.

2. Receipts-Local Sources.

   a. Real Estate Tax
   b. Per Capita Tax
   c. Act 511 Taxes - (Total)
   d. Total All Taxes - (Including delinquent tax)
   e. Total Local Receipts - (Including non-revenue receipts)

3. Per Cent of Local Receipts From Various Sources.

   a. Real Estate
   b. Per Capita
   c. Act 511
   d. Delinquent Tax

4. State Subsidy.

   a. Instruction
   b. Transportation
   c. Rental
   d. Other Subsidy - (Subsidy can be broken down into more categories if desired)
   e. Total All Subsidy

5. Total Income.

   a. Local Sources
   b. State Subsidy
   c. Total Receipts - (Include balance on hand)
   d. Per cent From Each Source

6. General Fund Expenditure.

   a. Instruction - (Including certain outgoing transfers see page 3)
   b. Debt Service
   c. Capital Outlay
   d. Current Expenses (All expenses except b and c above)
   e. Total General Fund Expenditures (b + c + d)

7. Current Expenditure Pattern.

   Show the per cent expended for each of the main items for current year and a comparison with State and/or National trends.

   A circle graph can be used to show the per cent being expended for each of the three categories: Current Expense, Capital Outlay and Debt Service.

8. Weighted Average Daily Membership.

   a. Average Daily Membership
      1. Kdg. 2. Elem. 3. Sec. 4. Vo. Tech.
   b. WADM = Kdg x 0.5 + Elem x 1.0 + Sec x 1.36 + Vo. Tech x 1.76

9. Expenditures Per WADM.

   a. Instruction (Including Outgoing Transfers to other districts and county operated classes)
   b. Current Expenses
   c. Debt Service (may be omitted)
   d. Capital Outlay (may be omitted)
   e. Total Expenditures

It is suggested that a graphic presentation be made showing on one graph the changes in Assessed and Market Values and on the second graph the changes in Instruction and Current Expense costs per WADM. These graphs should also show the projections of each of the items for the next ten years. These graphs are basic to the report. (See appendix for sample.)

C. THE FINANCIAL PICTURE FOR THE FUTURE.

The difficult part is the projection of future income and expenditures for each of the next 10 years. The final calculation will show the estimated tax levy on real estate for each year. (All tables for ten years.)

1. Projected Valuations.

   a. Market Value
   b. Per Cent Increase in M.V. (over previous year)
   c. Assessed Value
   d. Per Cent Increase in A.V. (over previous year)
   e. Ratio A.V. to M.V. (current year)

2. Projected WADM.

   a. Projected ADM (Kdg., Elem., Sec., Vo. Tech.)
   b. WADM Computed

3. Projected Current Expenses.

   a. WADM
   b. Current Expense Per WADM
   c. Total Current Expenses for each year (a x b)

4. Projected Costs - Total

   a. Capital Outlay - (how much new equipment, etc.)
   b. Debt Service - (current rental + estimate for any new facilities)
   c. Current Expense - (see 3c above)
   d. Total Cost - (a + b + c)

5. Source of Income Needed.

   a. Total Estimated Needs - (see 4d)
   b. Total Income Anticipated - (Will include any extra amount desired as a surplus.)
   c. State Subsidy - (Total for year projected)
   d. Total Local Support - (all sources)

   Note: c + d must equal b

6. Projected Local Income - (all sources)

   a. Local Income Needed - (see 5d)
   b. Delinquent Tax - (based on rate of collection in previous years, if 95%, use 3% of previous year assessment.)
   c. Tuition, etc., if applicable
   d. Earnings - (should increase as amount handled increases) (short term investments are important)
   e. Total From Current Tax - (enough to provide balance needed of a.) a - (b + c + d) = e.

7. Projected Local Taxation.

   a. Total Tax Needed - (see 6.e above)
   b. Amount 511 Taxes
      1. Wage
      2. Per Cap.
      3. Deed Transfer, etc.
   c. Per Cap. Sec 679
   d. Real Estate Tax = a - (b + c)
   e. R. E. Millage required $\frac{d}{1,c}$ - (Use past experience for per cent collected)

D. PROVISION FOR YEARLY EVALUATION.

The plan should include a provision for evaluation of projected income and costs at the close of each fiscal year. We suggest a full page for each of the next ten years be provided where projected and actual figures can be compared. After the first two years a new projection may be needed for the future. It is certain that considerable variation from the estimates is not only possible but probable. The value of the Long Range Plan is the continuation of the effort to be, at least somewhat, prepared for the future. (See appendix for sample page for Evaluation.)

APPENDIX

Sample Pages:

1. Projection Tables
2. Projection Graphs
3. Provision For Evaluation

B. THE FINANCIAL FUTURE OF THE DISTRICT.

1. The Projected Wealth of the District.

The State Tax Equalization Board admits that it has no "crystal ball" to determine the projected Market Value of any district. However, projections of Assessed Values are essential for long range planning since the anticipated income from real estate tax will continue to be the major source of support for the local share of the cost of public education and State Market Value is the basis for all State subsidies. Table IV-11 shows the Projected Valuations to 1976-77.

TABLE IV-11

Projected Valuations

	M. V.	% Increase	A. V.	% Increase	AV/MV
1967	$35,600,000	10.8	$12,826,305	5.3	36.0
1968	38,100,000	7.0	13,339,000	4.0	35.0
1969	39,600,000	3.9	13,872,000	4.0	35.0
1970	43,400,000	9.6	14,982,000	8.0	34.5
1971	45,800,000	5.5	15,581,000	4.0	34.0
1972	47,900,000	4.6	16,204,000	4.0	33.8
1973	50,200,000	4.8	16,852,000	4.0	33.6
1974	52,300,000	4.2	17,526,000	4.0	33.5
1975	54,571,000	4.3	18,227,000	4.0	33.4
1976	56,900,000	4.3	18,956,000	4.0	33.3

See plate IV, page IV-17 for graphic presentation of projections of Assessed and Market Values.

TABLE IV-13

Projected Current Expense

	WADM	Current Expense Per WADM	Total Current Expense
1967-68	3279	$442	$1,449,318*
1968-69	3276	470	1,539,720
1969-70	3265	496	1,619,440
1970-71	3248	522	1,695,456
1971-72	3191	549	1,751,859
1972-73	3156	575	1,814,700
1973-74	3112	603	1,876,536
1974-75	3081	630	1,941,030
1975-76	3023	656	1,983,088
1976-77	2959	682	2,080,380
Increase	-(9.8)%	154.3%	143.5% Increase

*The 1967-68 budget included 1,518,231 for Current Expenses, $68,913 above the projections. A surplus of $72,087 is indicated in the 1967-68 budget.

TABLE IV-14

Projected Costs 1968-1977

	Debt Service	Capital Outlay	Current Expense	Total
1967-68	$338,548	$17,365	$1,518,231	$1,874,144
1968-69	398,548**	40,000	1,539,720	1,978,268
1969-70	458,548	40,000	1,619,440	2,117,988
1970-71	458,500	40,000	1,695,456	2,193,956
1971-72	458,500	40,000	1,751,859	2,250,359
1972-73	458,500	40,000	1,814,700	2,313,200
1973-74	458,500	40,000	1,876,536	2,375,036
1974-75	458,500	40,000	1,941,030	2,439,530
1975-76	458,500	40,000	1,983,088	2,481,588
1976-77	458,500	40,000	2,080,380	2,578,880
	135.4%			137.60%

* 1967-68 figures are from the current budget.
**Includes $60,000 - ½ year payment of rental on new middle school.

3. Projected Income.

(a) Local Effort.

1. Per Capita Tax, Sec. 679.

The $5.00 per Capita Tax will be continued with the anticipated receipts based on projected adult residents. The average increase in per capita assessment has been 22 persons per year for the past ten years. There is no indication of any drastic change in population trend. Therefore Table IV-14 shows the total income needed and the amount to be provided by local support and State subsidy.

2. Act 511 Taxes.

These taxes have been yielding a rather steady amount since 1962-63 with a current yield of approximately $110,000. These taxes are currently levied under Act 511, a $5.00 personal tax, one half per cent Wage Tax and a one per cent transfer tax.

Table IV-15 shows the sources and amount of the Total Income Needed.

TABLE IV-15

Source of Income Needed

	Local Support	State Subsidy	Total Estimated Need	Total Income**
1967-68*	$ 752,338	$1,128,222	$1,880,560#	$1,946,232
1968-69	842,596	1,163,584	2,006,180	2,106,180
1969-70	910,735	1,207,253	2,117,988	2,217,988
1970-71	965,341	1,228,615	2,193,956	2,293,956
1971-72	1,012,662	1,237,697	2,250,359	2,350,359
1972-73	1,064,072	1,249,128	2,313,200	2,413,200
1973-74	1,116,267	1,258,769	2,375,036	2,475,036
1974-75	1,170,974	1,268,556	2,439,530	2,539,530
1975-76	1,191,162	1,290,426	2,481,588	2,581,588
1976-77	1,237,862	1,341,018	2,578,880	2,678,880

* 1967-68 figures are taken from current budget.
\# This amount is $6,416 above Projected Cost.
** Allows for a beginning balance of $100,000 except in 1967-68.

A balance of $100,000 is scheduled to be carried over from year to year to avoid borrowing funds to finance September disbursements. If this balance should be inadequate, as rental payments and other expenses increase, then a slight increase in taxes for one year will build up the surplus to the desired figures.

The percentage provided from State Subsidy is gradually decreased from a high of 60 per cent in 1967-68 (budget est.) to 52 per cent in 1976-77. As previously explained this should be on the conservative side. If the State's share continues at a higher rate, then real estate taxes can be reduced below the estimated millage.

The calculation of income from local sources is shown in Table IV-16.

TABLE IV-17

Projected Local Taxation

	Total Tax Money Needed	Wage	Per Cap	Transfer	Per Cap Sec 679	Real Estate Tax	R. E. Mills Reqd.
1967-68*	$ 739,338	$55,000	$42,783	$12,000	$26,716	$602,838	47
1968-69	816,596	57,000	22,450	13,000	22,450	701,696	55.4
1969-70	882,635	59,000	23,550	13,500	23,500	763,085	57.9
1970-71	939,141	61,000	24,700	14,000	24,700	814,741	57.3
1971-72	984,662	63,100	25,900	14,500	25,900	855,262	57.8
1972-73	1,034,472	65,300	27,200	15,000	27,200	899,772	58.4
1973-74	1,084,967	67,600	28,550	15,500	27,500	945,817	59.1
1974-75	1,137,974	70,000	30,000	16,000	30,000	991,974	59.6
1975-76	1,156,362	72,400	31,500	16,500	31,500	1,004,462	58.0
1976-77	1,202,662	75,000	33,050	17,000	33,000	1,044,612	58.0

* Figures from 1967-68 budget.

Projection of local tax income is a very difficult and tenuous undertaking. The income for all the various taxes must be estimated; in some cases past results are not a reliable guide. Per Capita tax income depends on population growth, wage tax income on economic conditions, inflation and number of wage earners, real estate tax millage is based on projected assessed valuations.

In the case of per capita tax an annual increase of only five per cent was used; this is the average increase over the past ten years. A growth of 3.5 per cent annually has been used for wage tax. This is merely to allow for inflation; it makes no allowance for other factors and is therefore very conservative. The transfer tax is very difficult to estimate. An increase of $500 per year has been used; this is purely arbitrary but as Assessed Values increase, the return from this tax should increase but there is no basis for estimating the flunctuation of property sales from year to year.

MARKET VALUES AND ASSESSED VALUES 1957-1976

MILLIONS OF DOLLARS

70
65
60
55
50
45
40
35
30
25
20
15
10
5

MARKET VALUES

$21,806,600

$32,955,500

$56,900,000

ASSESSED VALUES

$5,700,575

$ 12,177,990

$18,956,000

YR. 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976

EXPENDITURES PER W.A.D.M

1958-1967 ACTUAL EXPENSE
1968-1977 PROJECTED EXPENSE

$700
$600
$500
$400
$300
$200
$100

$682
$652
$450
$413.84 (166% of I.E.)
$273.09
$239.07
$166.10

I.E.-66%
I.E.-69%

CURRENT EXPENSES
INSTRUCTION EXPENSE

1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977

YEAR ENDING JUNE 30

EVALUATION OF PROJECTIONS

To Be Completed At The End Of The 1968-69 Fiscal Year

1968 - 69	Projected	Actual	Variation From Projections
Real Estate Tax	$ 701,696		
Per Capita Tax	22,450		
Act 511 Taxes	92,450		
Total All Taxes	834,596		
Total Local Receipts	842,596		
Total State Subsidy	1,163,584		
Total All Receipts	2,106,180		
Anticipated Balance	100,000		
Total Current Expenses	1,539,720		
Total Capital Outlay	40,000		
Total Debt Service	398,548		
Total General Fund Expense	1,978,268		
WADM	3,276		
Current Expense Per WADM	470		
Assessed Valuation	$10,956,400		
State Market Valuation'	$34,200,000		

Comments:

Note: Similar pages will be included for each year 1969-70 to 1976-77.